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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,207	03/02/2004	Xing Pei	A04P1020	4191
36802 7590 04/24/2007 PACESETTER, INC. 15900 VALLEY VIEW COURT SYLMAR, CA 91392-9221			EXAMINER WU, EUGENE TONG	
			ART UNIT	PAPER NUMBER
			3766	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/792,207

Applicant(s)

PEI ET AL.

Examiner

Eugene T. Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to:

03/07/2006 - Applicant response.

12/11/2006 - Non-final rejection.

Claim Objections

1. The amendments submitted 03/07/2007 are sufficient to overcome the objections made in the previous office action.

Claim Rejections - 35 USC § 112

2. The amendments submitted 03/07/2007 are sufficient to overcome the rejection made in the previous office action.

Response to Arguments

3. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 9, 12, 13, 18, 19 rejected under 35 U.S.C. 102(b) as being anticipated by Weiner et al. (US 5,643,326).

Regarding claims 1, 12, and 19, Weiner discloses the same invention substantially as claimed, including an atrial detector 902 (Figure 9) and R wave detector 920, and a rate limit circuit (Figure 2) that determines a minimum RA interval beginning with an R wave and an end (abstract; Col. 6, lines

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23-31, 52-63), determines if the end of the escape interval (Col. 5, lines 17-18) is before the end of the minimum RA interval 912/934 (Col. 6, lines 23-31, 52-63; Figure 9), and if it is, extends the escape interval so that its end coincides with the end of the minimum RA interval.

Regarding claims 3 and 13, Weiner discloses a dual chamber pacing device and sensing the R wave with a ventricular electrode channel (Figures 1, 2).

Regarding claims 9 and 18, Weiner discloses a rate-responsive mode (abstract).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 2, 4, 5, 10, 12, 14, 15, 16, 19-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Sloman (US 6,101,416) in view of Weiner et al. (US 5,643,326).

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Regarding claims 1, 2, 12, 14, and 19, Sloman discloses the same invention substantially as claimed, including detecting an atrial activation (Col. 7, lines 13-39), and detecting a far-field R wave (Col. 4, lines 35-50). Sloman does not disclose a rate limit circuit. However, Weiner discloses a rate limit circuit (Figure 2) that determines a minimum RA interval beginning with an R wave and an end (Col. 6, lines 23-31, 52-63), determines if the end of the escape interval (Col. 5, lines 17-18) is before the end of the minimum RA interval 912/934 (Col. 6, lines 23-31, 52-63; Figure 9), and if it is, extends the escape interval so that its end coincides with the end of the minimum RA interval, for the purpose of eliminating the possibility of competitive atrial pacing (Col. 1, line 48). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the rate limit circuit of Weiner with the device of Sloman for the purpose of eliminating the possibility of competitive atrial pacing.

Regarding claims 4, 15, and 20, Sloman further discloses a window delay between the delivery of the atrial stimulation pulse and generation of the far-field signal, which is considered equivalent to Applicant's blanking interval commencing with detection of the atrial activation and ending prior to detection of the R wave (Col. 9, lines 8-29).

Regarding claims 5, 16, and 21, Sloman further discloses dynamically varying the blanking interval (Col. 6, lines 9-36; Figures 4 and 5).

Regarding claim 10, Sloman further discloses a morphology detector (Col. 5, lines 46-64; Col. 9, lines 30-43; Figure 3).

9. Claims 6, 7, and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Sloman (US 6,101,416) and Weiner et al. (US 5,643,326) as applied to claims 4 and 20 above, and further in view of Sholder (US 5,334,220).

Sloman and Weiner do not disclose a first blanking period duration responsive to intrinsic atrial activity shorter than a second blanking period duration responsive to paced atrial activity.

However, Sholder teaches using a PV interval that is shorter than an AV interval, in order to account for the latency time between applying an A-pulse and the atrial tissue responding with depolarization (Col. 8, lines 28-33). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the PV interval shorter than the AV interval of Sholder with the modified device of Sloman and Weiner, in order to account for the latency time between applying an A-pulse and the atrial tissue responding with depolarization.

10. Claims 8, 11, 17, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Sloman (US 6,101,416) and Weiner et al. (US 5,643,326) as applied to claims 1, 12, and 19 above, and further in view of McClure et al. (US 6,711,438).

Sloman and Weiner do not disclose a refractory period or a revised refractory period. However, McClure shows a PVARP and PVAB, which are considered equivalents of Applicant's refractory period following detection of atrial activation, and also shows a T-wave blanking interval, which is considered equivalent to Applicant's revised refractory period, for the purpose of determining the true atrial rate (Col. 4, lines 8-38, 41-53; Figure 5). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the refractory and revised refractory periods of McClure with the modified device of Sloman and Weiner, in order to determine the true atrial rate.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene T. Wu whose telephone number is (571) 272-3109. The examiner can normally be reached on M-F: 9 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ETW
04/19/2007

Carl Layno
Supervisory Patent Examiner
Art Unit 3766

Carl H. Layno
CARL LAYNO
PRIMARY EXAMINER
ACTING SPE, Au 3766